

Amendments to the Claims:

The listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Previously Presented) A substrate processing method that applies a hydrogen sintering process to an electronic device substrate on which a semiconductor device is already formed, the substrate processing method comprising the steps of:

forming an atmosphere comprising hydrogen radicals and hydrogen ions by exciting a processing gas including a noble gas and hydrogen into a plasma, and

applying the hydrogen sintering process to the electronic device substrate by exposing the electronic device substrate to the hydrogen radicals and the hydrogen ions.

2. (Previously Presented) The method as claimed in claim 1, wherein the atmosphere including the hydrogen radicals and the hydrogen ions is selected from the group consisting of hydrogen gas, heavy hydrogen gas, and mixtures thereof.

3. (Previously Presented) The method as claimed in claim 1, wherein the plasma is formed by microwaves.

4. (Previously Presented) The method as claimed in claim 1, wherein the plasma is formed by emitting microwaves from a planar antenna.

5. (Previously Presented) The method as claimed in claim 1, wherein the semiconductor device includes a MOSFET and a DRAM.

6. (Currently Amended) The method as claimed in claim 1, wherein the substrate for the electronic device is ~~one~~ selected from the group consisting of a Si substrate, a SiGe substrate, and a glass substrate.

7. (Previously Presented) The method as claimed in claim 5, wherein the MOSFET or DRAM includes one of a thermal oxide film and a thermal nitride film as a gate insulation film.

8. (Currently Amended) The method as claimed in claim 5, wherein a gate insulation film of the MOSFET is formed by ~~one~~ a process selected from the group consisting of plasma oxidation, plasma nitriding, catalytic oxidation, catalytic nitriding, CVD, and PVD.

9. (Previously Presented) The method as claimed in claim 1, wherein the semiconductor device includes a storage element using a high dielectric insulation film as an interelectrode insulation film.

10. (Previously Presented) The method as claimed in claim 1, wherein the hydrogen radicals and the hydrogen ions are formed at a pressure of 13.3 to 267 Pa.

11. (Previously Presented) A method of fabricating a semiconductor device including a step of hydrogen sintering wherein an electronic device substrate is exposed to a plasma containing hydrogen, said method comprising the steps of:

forming a gate insulation film on said substrate;

forming an electrode of polysilicon on said gate insulation film; and

exposing said polysilicon electrode to an atmosphere containing hydrogen radicals and hydrogen ions, said hydrogen radicals and said hydrogen ions being formed by exciting a gas containing a noble gas and a hydrogen gas by plasma.

12. (Previously Presented) The method as claimed in claim 11, wherein the atmosphere including the hydrogen radicals and the hydrogen ions is selected from the group consisting of a hydrogen gas, a heavy hydrogen gas, and mixtures thereof.

13. (Previously Presented) The method as claimed in claim 11, wherein the plasma is formed by microwaves.

14. (Previously Presented) The method as claimed in claim 11, wherein the plasma is formed by emitting microwaves from a planar antenna.

15. (Previously Presented) The method as claimed in claim 11, wherein the semiconductor device includes a MOSFET and a DRAM.

16. (Currently Amended) The method as claimed in claim 11, wherein the substrate for the electronic device is ~~one~~ selected from the group consisting of a Si substrate, a SiGe substrate, and a glass substrate.

17. (Previously Presented) The method as claimed in claim 15, wherein the MOSFET or DRAM includes one of a thermal oxide film and a thermal nitride film as a gate insulation film.

18. (Currently Amended) The method as claimed in claim 15, wherein a gate insulation film of the MOSFET is formed by ~~one~~ a process selected from the group consisting of plasma oxidation, plasma nitriding, catalytic oxidation, catalytic nitriding, CVD, and PVD.

19. (Previously Presented) The method as claimed in claim 11, wherein the semiconductor device includes a storage element using a high dielectric insulation film as an interelectrode insulation film.

20. (Previously Presented) The method as claimed in claim 11, wherein the hydrogen radical and the hydrogen ions are formed at a pressure of 13.3 to 267 Pa